UNIVERSITI TEKNOLOGI MARA

CADMIUM AND LEAD CONTENT IN SELECTED SLIMMING AND WEIGHT LOSS PRODUCTS FROM LOCAL MARKET

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Declaration by Student

Project entitled “Cadmium and Lead Content in Slimming and Weight Loss Product from Local Market” is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Mr Nasaruddin bin Abdul Rahman as Project Supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons.)

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Abstract

Cadmium and Lead Content in Slimming and Weight Loss Products from Local Market

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Introduction: This study was carried out to determine the cadmium (cd) and lead (pb) contents in slimming and weight loss products sold in local market at dietary and cosmetics shop. The reason of this study is that there are rising number of different products and different brand or company that promote the slimming and weight loss after consumption in a short period. However, there are also products that have been sealed by the local authority that have content of poisonous chemical. The result from this study will be compared with the standard of permissible limit as stated in the fourteenth schedule of Malaysia Food Regulation 1985. Thirty samples are collected by buying them from local dietary and cosmetics shop in district of Klang. All samples are from different brands and manufacturer but promote the same results after consumption, which are slimming and weight loss. **Methodology:** It is a cross-sectional study design. Thirty samples collected undergone sample preparation using dry ashing technique. Samples are analysed using Atomic Absorption Spectrophotometer model Perkin Elmer (AAS). Distribution of questionnaires and interviews are among one hundred consumers that consume the slimming and weight loss products were to determine the age, weight and frequency of product consumption. The results of cadmium and lead concentration in samples were then analysed with One Sample Test to determine the mean of both concentration. **Result:** From sample analysis, the result approved the existence of cadmium ad lead in slimming and weight loss products. The concentration of cadmium (cd) is in range of 0.3 mg/ kg to 102.4 mg/ kg. While, for lead (pb) concentration detected is in range of 0.3 mg/ kg to 118.0 mg/ kg. Both result are compared with the standard of permissible limit in Fourteenth schedule in Malaysia Food Regulation 1985 for cadmium (cd) is 1 mg/ kg and lead (pb) 2 mg/ kg, for cadmium(cd), only two sample did not exceeded the limit of 1 mg/ kg while for lead (pb), just two sample did not exceeded the limit of 2 mg/kg. The health risk assessment was conducted for all one hundred respondent who are the consumer of various type slimming and weight loss product that are using those products in range of less than a month to twelve month. The hazard index obtained were below than the ratio of 1.0 (HI <1). **Conclusion:** In conclusion, it is advised to get a healthy lifestyle to avoid the obesity and other related complication. Taking slimming and weight loss product is not the proper solution. It may give the impressive result of firm body and weight loss, however, it would give other health impact in the future.

Keywords: Cadmium, Lead, Slimming and weight loss products,